

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SALMON FALLS RIVER DAM	Lake Area (ha):	37.23
Town: ROLLINSFORD	Maximum depth (m):	6.7
County: Strafford	Mean depth (m):	2.1
River Basin: Coastal	Volume (m ³):	786500
Latitude: 43°13'45" N	Relative depth:	1.0
Longitude: 70°49'05" W	Shore configuration:	1.43
Elevation (ft): 25	Areal water load (m/yr):	---
Shore length (m): 3100	Flushing rate (yr ⁻¹):	---
Watershed area (ha): ---	P retention coeff.:	---
% watershed ponded: ---	Lake type:	artificial

BIOLOGICAL:

27 February 1996

12 September 1995

DOM. PHYTOPLANKTON (% TOTAL)	#1	NO DOMINANT; MOSTLY	APHANIZOMENON 95%
	#2	SMALL PENNATE DIATOMS	MELOSIRA 5%
	#3	& FILAMENTOUS ALGAE	
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			90.75
DOM. ZOOPLANKTON (% TOTAL)	#1	NO ZOOPLANKTON	KERATELLA 34%
	#2	OBSERVED	SYNCHAETA 21%
	#3		
ROTIFERS/LITER		<1	284
MICROCRUSTACEA/LITER		<1	66
ZOOPLANKTON ABUNDANCE (#/L)		<1	430
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			0.4
BOTTOM DISSOLVED OXYGEN (mg/L)		12.5	8.7
BACTERIA (E. coli, #/100 ml)	#1		6
	#2		20
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: SALMON FALLS RIVER DAM

Town: ROLLINSFORD

	27 February 1996		12 September 1995		
DEPTH (m)	3.0		2.0		4.0
pH (units)	6.3		9.3		7.8
A.N.C. (Alkalinity)	3.0		25.9		23.2
NITRATE NITROGEN	0.13		0.50		0.73
TOTAL KJELDAHL NITROGEN	0.20		1.78		1.52
TOTAL PHOSPHORUS	0.018		0.078		0.091
CONDUCTIVITY ($\mu\text{mhos}/\text{cm}$)	63.7		246.0		247.0
APPARENT COLOR (cpu)	60		110		110
MAGNESIUM			1.87		
CALCIUM			11.9		
SODIUM			35.4		
POTASSIUM			2.49		
CHLORIDE	11		48		48
SULFATE			26		27
TN : TP	18		29		25
CALCITE SATURATION INDEX					

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1995

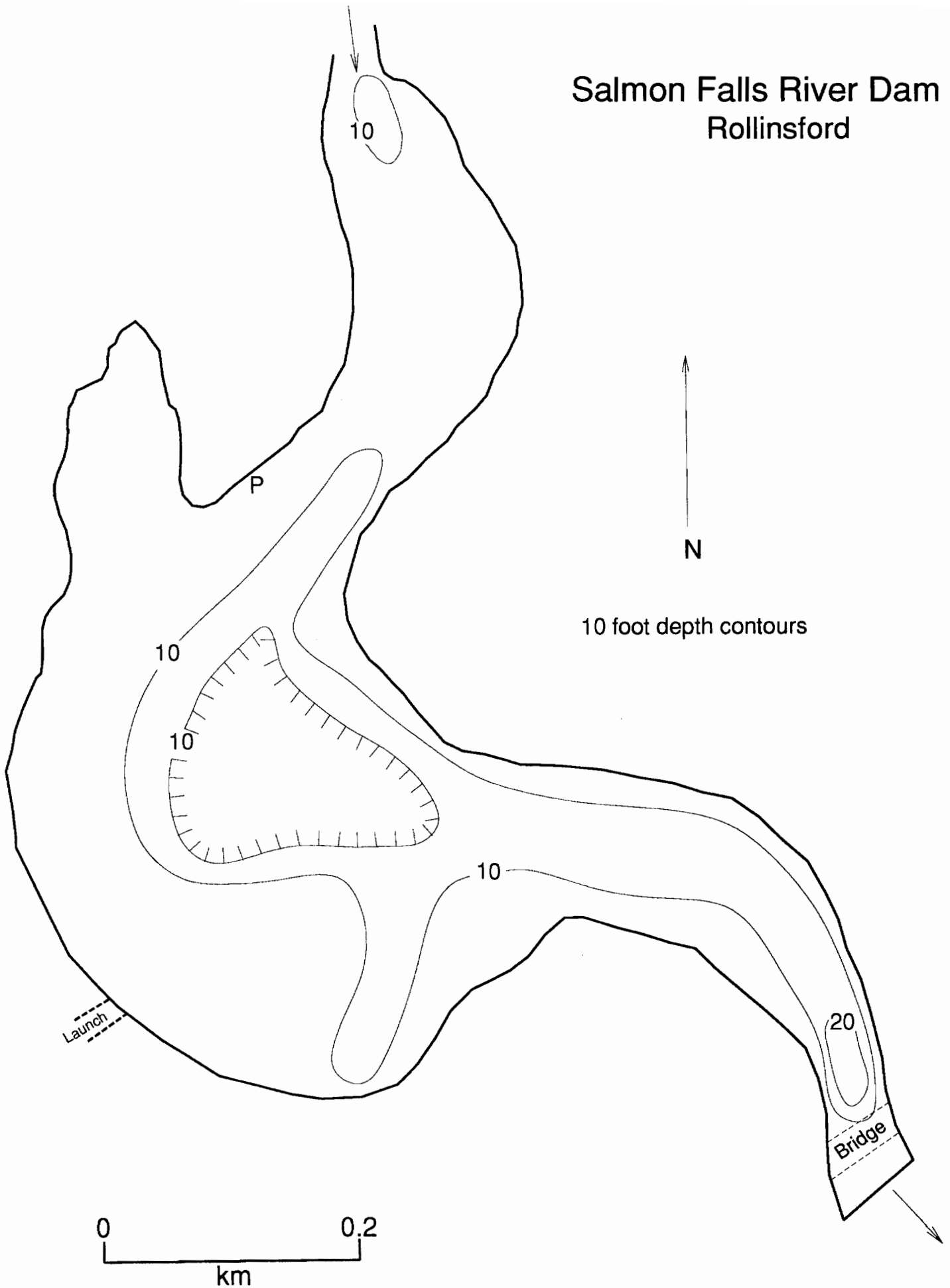
D.O. S.D. PLANT CHL TOTAL CLASS

**	6	3	6	15	Eutro.
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COMMENTS:

1. This is an impoundment of the Salmon Falls River upstream of the Portland Road bridge. It is not considered to be a lake.
2. At the summer sampling the impoundment was suffering a dense bloom of the blue-green alga *Aphanizomenon*. The algal bloom caused an elevated pH reading and may have contributed to the high color values.
3. Essentially all water quality values (nutrients, cations, alkalinity, conductivity, etc.) were very high. Water clarity was about 15 inches.
4. The watershed area was not determined and related morphometric data were not calculated.

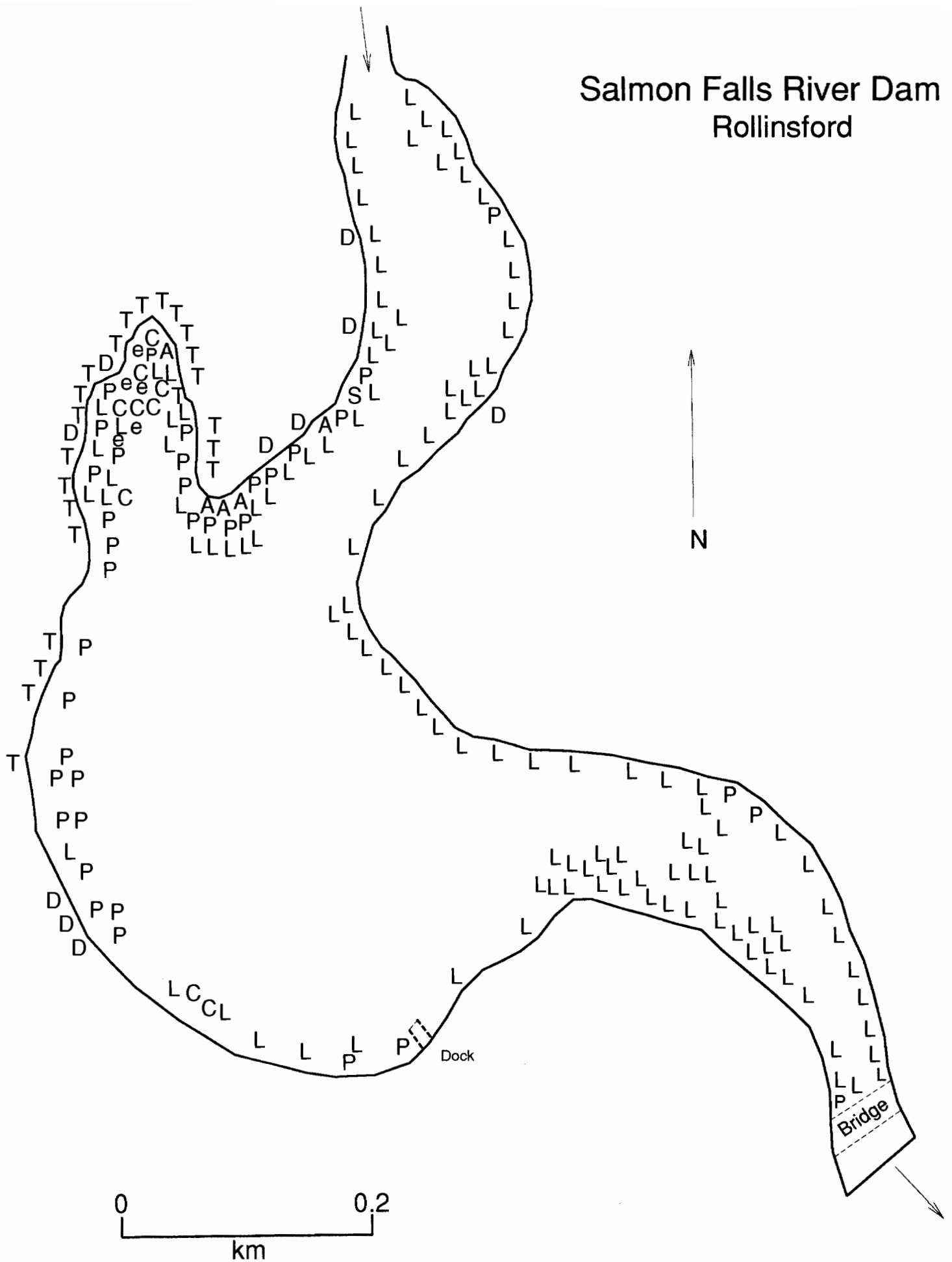
Salmon Falls River Dam Rollinsford



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Salmon Falls River Dam

Rollinsford



AQUATIC PLANT SURVEY

LAKE: SALMON FALLS RIVER DAM

TOWN: ROLLINSFORD

DATE: 09/12/95

[illegible]

OVERALL ABUNDANCE: Common

GENERAL OBSERVATIONS:

1. The overall abundance is for the rooted plants -- the duckweed was abundant.